

Application No. 10/006,373  
Response to Office Action

Customer No. 01933

**Listing of Claims:**

Claims 1-27 (Canceled).

28. (New) A laser microscope which irradiates a sample with a laser light including laser lines of different emission wavelengths, comprising:

a light source to emit the laser light;

5 a spectral resolution section to spectrally resolve the laser light into lights of the different emission wavelengths;

a light receiving element array to receive the lights simultaneously and to output a detection signal that includes light intensity information of the lights; and

10 a controller to simultaneously control light intensities of the respective laser lines based on the detection signal.

29. (New) The laser microscope according to claim 28, further comprising an acousto-optical element fixed to an output end of the laser source to alter the light intensities of the laser lines, wherein the acousto-optical element receives a control signal outputted from the controller.

30. (New) The laser microscope according to claim 29, wherein the controller controls the acousto-optical element to

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control the respective light intensities of the laser lines to be constant.

31. (New) The laser microscope according to claim 28, wherein the light source comprises one laser light source that emits the laser light including the laser lines of the different emission wavelengths.

32. (New) The laser microscope according to claim 28, wherein the light source comprises a plurality of laser light sources that emit laser lights of different emission wavelengths.

33. (New) The laser microscope according to claim 28, wherein the spectral resolution section comprises one of a prism, a diffraction grating or a beam splitter.

34. (New) The laser microscope according to claim 28, wherein the light receiving element array comprises one of a split photodiode and a solid-state image sensing device.

35. (New) The laser microscope according to claim 28, further comprising a converging lens that is disposed between the spectral resolution section and the light receiving element array;

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5            wherein the spectral resolution section comprises a prism,  
the light receiving element array comprises a one-dimensional CCD  
which receives the laser lights of the different emission  
wavelengths, and the converging lens converge the lights of the  
different emission wavelengths resolved by the prism on the  
10 one-dimensional CCD.

36. (New) The laser microscope according to claim 28,  
further comprising:

an optical fiber to transmit the laser light from the laser  
source;

a collimator lens to collimate the laser light emitted from  
the optical fiber;

a beam splitter to split the laser light collimated by the  
collimator lens and to guide a part of the split laser light to  
the spectral resolution section; and

a converging lens to converge the lights of the different  
emission wavelengths on the light receiving element array.

37. (New) The laser microscope according to claim 36,  
wherein the collimator lens, the beam splitter, the spectral  
resolution section, the converging lens, and the light receiving  
element array are formed in a single block, and the block is

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attached to and detachable from a main body of the laser  
microscope.

38. (New) The laser microscope according to claim 28,  
wherein the sample is marked with fluorescent markers, the  
emission wavelengths of the laser lines of the laser light are  
suitable to cause the marked sample to emit a plurality of  
5 fluorescent lights, and the laser microscope detects the  
plurality of fluorescent lights emitted from the sample.

39. (New) The laser microscope according to claim 38,  
wherein the sample is dyed with a plurality of fluorescent  
indicators, and the emission wavelengths of the laser lines are  
excitation wavelengths of the fluorescent indicators.